QH
301
D48

Developmental Biology

An International Journal

Published Under the Auspices of the Society for Developmental Biology

M. V. EDDS, JR., *Editor-in-Chief*

Editorial Board

JEAN BRACHET · JAMES D. EBERT · PHILIP GRANT
ERNST HADORN · HERBERT STERN · PAUL WEISS

Consulting Editors

R. AMPRINO · D. D. BROWN · E. G. BUTLER · E. C. CANTINO
A. J. COULOMBRE · A. GLÜCKSMANN · P. B. GREEN · J. GROSS
P. R. GROSS · J. B. GURDON · E. D. HAY · T. HULTIN · A. JOST
A. MONROY · H. RUBIN · P. SENGEL · F. C. STEWARD · S. WAELSCH
E. ZWILLING

Volume 16 · 1967

ACADEMIC PRESS, NEW YORK AND LONDON

COPYRIGHT ©, 1967, BY ACADEMIC PRESS INC.

ALL RIGHTS RESERVED

NO PART OF THIS VOLUME MAY BE REPRODUCED IN ANY FORM, BY PHOTOSTAT, MICROFILM, OR ANY OTHER MEANS, WITHOUT WRITTEN PERMISSION FROM THE PUBLISHERS.

Made in the United States of America

CONTENTS OF VOLUME 16

Number 1, July 1967

William K. Baker. A Clonal System of Differential Gene Activity in *Drosophila* (*Accepted December 1, 1966*) . 1

Yvette Perez-Dávila and William K. Baker. Effect of Actinomycin D on the Development of the Early Imaginal Eye Disks of *Drosophila melanogaster* (*Accepted December 1, 1966*) 18

Michio Ito and Herbert Stern. Studies of Meiosis *in Vitro*. I. *In Vitro* Culture of Meiotic Cells (*Accepted December 8, 1966*) 36

Michio Ito, Yasuo Hotta, and Herbert Stern. Studies of Meiosis *in Vitro*. II. Effect of Inhibiting DNA Synthesis during Meiotic Prophase on Chromosome Structure and Behavior (*Accepted December 8, 1966*) 54

Robert L. Trelstad, Elizabeth D. Hay, and Jean-Paul Revel. Cell Contact during Early Morphogenesis in the Chick Embryo (*Accepted November 5, 1966*) 78

Number 2, August 1967

David J. Silver and Donald G. Comb. Acetic Acid-Soluble Proteins in the Developing Sea Urchin (*Accepted December 14, 1966*) 107

Judith Medoff. Enzymatic Events during Cartilage Differentiation in the Chick Embryonic Limb Bud (*Accepted January 6, 1967*) 118

H. F. Stumpf. Über die Lagebestimmung der Kutikularzonen innerhalb eines Segmentes von *Galleria mellonella* (*Accepted December 8, 1966*) 144

Ronald Piddington. Hormonal Effects on the Development of Glutamine Synthetase in the Embryonic Chick Retina (*Accepted December 28, 1966*) 168

Sven Hörstadius, Lars Josefsson, and John Runnström. Morphogenetic Agents from Unfertilized Eggs of the Sea Urchin *Paracentrotus lividus* (*Accepted January 11, 1967*) 189

Number 3, September 1967

C. Ward Kischer. Effects of Specific Prostaglandins on Development of Chick Embryo Skin and Down Feather Organ, *in Vitro* (*Accepted January 16, 1967*) 203

Robert L. DeHaan. Regulation of Spontaneous Activity and Growth of Embryonic Chick Heart Cells in Tissue Culture (*Accepted February 2, 1967*) 216

Mark Nameroff and Howard Holtzer. The Loss of Phenotypic Traits by Differentiated Cells. IV. Changes in Polysaccharides Produced by Dividing Chondrocytes (*Accepted February 16, 1967*) 250

W. D. Woodward and J. R. Fisher. Control of Xanthine Dehydrogenase in the Chick Pancreas (*Accepted March 13, 1967*) 282

Number 4, October 1967

Louis T. Stableford. A Study of Calcium in the Early Development of the Amphibian Embryo (*Accepted February 27, 1967*) 303

Kathryn F. Stein, Barbara E. Norris, and Janet Mason. Development of an Open Eyelid Mutant in *Mus musculus* (*Accepted March 15, 1967*) 315

Marcia L. Craig and Janice L. Southard. Some Factors Associated with a Developmental Change in Hemoglobin Components in Early Fetal Mice (*Accepted March 24, 1967*) 331

Richard Landesman. Neural-Mesodermal Interactions Subsequent to Neural Induction in *Ambystoma* (*Accepted March 29, 1967*) 341

K. Shiokawa and K. Yamana. Pattern of RNA Synthesis in Isolated Cells of *Xenopus laevis* Embryos (*Accepted April 6, 1967*) 368

K. Shiokawa and K. Yamana. Inhibitor of Ribosomal RNA Synthesis in *Xenopus laevis* Embryos (*Accepted April 6, 1967*) 389

Number 5, November 1967

Chr. P. Raven. The Distribution of Special Cytoplasmic Dif-

ferentiations of the Egg during Early Cleavage in *Limnaea stagnalis* (*Accepted April 4, 1967*) 407
W. Gehring. Clonal Analysis of Determination Dynamics in Cultures of Imaginal Disks in *Drosophila melanogaster* (*Accepted April 4, 1967*) 438
R. A. Flickinger, M. L. Freedman, and P. J. Stambrook. Generation Times and DNA Replication Patterns of Cells of Developing Frog Embryos (*Accepted April 6, 1967*) . 457
Keiji Marushige and Hironobu Ozaki. Properties of Isolated Chromatin from Sea Urchin Embryo (*Accepted April 7, 1967*) 474
J. V. Taderera. Control of Lung Differentiation *in Vitro* (*Accepted April 13, 1967*) 489

Number 6, December 1967

G. Robert DeLong and Alfred J. Coulombre. The Specificity of Retinotectal Connections Studied by Retinal Grafts onto the Optic Tectum in Chick Embryos (*Accepted May 18, 1967*) 513
Ph. Sengel et M. Kieny. Production d'une ptéryle supplémentaire chez l'embryon de Poulet. II. Analyse expérimentale (*Accepted May 4, 1967*) 532
Gertrude C. Moser and Salome Gluecksohn-Waelsch. Developmental Genetics of a Recessive Allele at the Complex T-Locus in the Mouse (*Accepted April 18, 1967*) . . 564
Eleri A. James. Regeneration and Division in *Stentor coeruleus:* the Effects of Microinjected and Externally Applied Actinomycin D and Puromycin (*Accepted April 18, 1967*) 577
Hector Timourian. Protein Synthesis in Sea Urchin Eggs. I. Fertilization-Induced Changes in Subcellular Fractions (*Accepted May 5, 1967*) 594

Author Index 612

Subject Index 613

Statement of ownership, management and circulation required by the Act of October 23, 1962, Section 4369, Title 39, United States Code; of

Developmental Biology

Published bimonthly at Exchange Place, Hanover, Pa. 17331 for Academic Press Inc., 111 Fifth Avenue, New York, N. Y. 10003. Managing Editor: M. V. Edds, Jr., Brown University, Providence, Rhode Island 02912.

Owned by Walter J. Johnson, Thekla Johnson, and Kurt Jacoby, 111 Fifth Avenue, New York, N. Y. 10003. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities: None.

Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner. Names and addresses of individuals who are stockholders of a corporation which itself is a stockholder or holder of bonds, mortgages or other securities of the publishing corporation have been included in paragraphs 2 and 3 when the interests of such individuals are equivalent to 1 percent or more of the total amount of the stock or securities of the publishing corporation.

Total no. copies printed, average no. copies each issue during preceding 12 months: 1500, single issue nearest to filing date: 1500. Paid circulation (a) to term subscribers by mail, carrier delivery or by other means, average no. copies each issue during preceding 12 months: 1110; single issue nearest to filing date: 1223. (b) Sales through agents, news dealers, or otherwise, average no. copies each issue during preceding 12 months: 0; single issue nearest to filing date: 0. Free distribution by mail, carrier delivery, or by other means, average no. copies each issue during preceding 12 months: 35; single issue nearest to filing date: 35. Total no. of copies distributed, average no. copies each issue during preceding 12 months: 1145; single issue nearest to filing date: 1258.

(Signed) J. B. Chertok, Vice President